SEQUENCE LISTING

<110> GREENSTEIN, DAVID
MILLER, MICHAEL A.

<120> COMPOSITIONS AND METHODS OF NEMATODE CONTROL

<130> N-7088

<140> 09/863,063
<141> 2001-05-21

<150> 60/205,829
<151> 2000-05-19

<150> 60/274,358
<151> 2001-03-08

<160> 33

<170> PatentIn Ver. 2.1

<210> 1
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 1

```
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
  1               5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
             20                  25                  30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
         35                  40                  45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
     50                  55                  60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
 65                  70                  75                  80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
                 85                  90                  95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
            100                 105                 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125
```

<210> 2
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 2
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
A1 Q S V P5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
85 90 95

Pro Asp Gly Ala Ala Arg Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 3
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 3
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Asn Ala Lys
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 4
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 4
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Asn Ala Lys
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 5
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 5
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Asp His Ile Lys
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Phe Asp Pro
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 6
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 6
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Ile
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 7
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 7
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Val Tyr Gly Ile Lys Thr Thr
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
85 90 95

```
Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
            100                 105                 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125


<210> 8
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 8
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
  1               5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr Arg Ile Lys
             20                  25                  30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
         35                  40                  45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
     50                  55                  60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
 65                  70                  75                  80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
                 85                  90                  95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
            100                 105                 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125


<210> 9
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 9
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
  1               5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
             20                  25                  30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
         35                  40                  45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
     50                  55                  60
```

```
Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
 65                  70                  75                  80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr
                 85                  90                  95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
            100                 105                 110

Gly Met Ala Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125
```

<210> 10
<211> 126
<212> PRT
<213> Caenorhabditis elegans

<400> 10

```
Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys
  1               5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
             20                  25                  30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr
         35                  40                  45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
     50                  55                  60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly
 65                  70                  75                  80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn Thr
                 85                  90                  95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
            100                 105                 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125
```

<210> 11
<211> 126
<212> PRT
<213> Ascaris suum

<400> 11

```
Ala Gln Ser Val Pro Pro Gly Asp Ile Asn Thr Gln Pro Ser Gln Lys
  1               5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
             20                  25                  30

Ile Thr Asn Ala Gly Gly Arg Arg Ile Gly Trp Ala Ile Lys Thr Thr
         35                  40                  45
```

```
Asn Met Arg Arg Leu Ser Val Asp Pro Pro Cys Gly Val Leu Asp Pro
     50                  55                  60

Lys Glu Lys Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala Ala
 65                  70                  75                  80

Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn Thr
                 85                  90                  95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
            100                 105                 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Leu
        115                 120                 125
```

<210> 12
<211> 126
<212> PRT
<213> Ascaris suum

<400> 12

```
Ala Gln Ser Val Pro Pro Gly Asp Ile Asn Thr Gln Pro Gly Ser Lys
  1               5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys
            20                  25                  30

Ile Thr Asn Ala Gly Gly Arg Arg Ile Gly Trp Ala Ile Lys Thr Thr
        35                  40                  45

Asn Met Arg Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro
     50                  55                  60

Lys Glu Ser Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala Ala
 65                  70                  75                  80

Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn Thr
                 85                  90                  95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp
            100                 105                 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Leu
        115                 120                 125
```

<210> 13
<211> 21
<212> PRT
<213> Ascaris suum

<220>
<223> MSP-alpha

<400> 13

Arg Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Leu
20

<210> 14
<211> 21
<212> PRT
<213> Ascaris suum

<220>
<223> MSP-beta

<400> 14
Arg Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Leu
20

<210> 15
<211> 21
<212> PRT
<213> Globodera rostochiensis

<220>
<223> MSP1

<400> 15
Leu Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Val
20

<210> 16
<211> 21
<212> PRT
<213> Globodera rostochiensis

<220>
<223> MSP2

<400> 16
Leu Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Val
20

<210> 17
<211> 21

<212> PRT
<213> Globodera rostochiensis

<220>
<223> MSP3

<400> 17
Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Pro
20

<210> 18
<211> 21
<212> PRT
<213> Caenorhabditis elegans

<220>
<223> MSP142

<400> 18
Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Pro
20

<210> 19
<211> 21
<212> PRT
<213> Caenorhabditis elegans

<220>
<223> MSP33

<400> 19
Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Leu
20

<210> 20
<211> 21
<212> PRT
<213> Onchocerca volvulus

<220>
<223> MSP1

<400> 20
Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro
1 5 10 15

Ile Glu Tyr Asn Leu
20

<210> 21
<211> 127
<212> PRT
<213> Onchocerca volvulus

<220>
<223> MSP2

<400> 21
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 22
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 22
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
65 70 75 80

```
Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
                 85                  90                  95

Thr Pro Asp Gly Ala Ala Arg Gln Phe Arg Arg Glu Trp Phe Gln Gly
            100                 105                 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125


<210> 23
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 23
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Asn Ala
  1               5                  10                  15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
            20                  25                  30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
         35                  40                  45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
     50                  55                  60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
 65                  70                  75                  80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
                 85                  90                  95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
            100                 105                 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125


<210> 24
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 24
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Asn Ala
  1               5                  10                  15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
            20                  25                  30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
         35                  40                  45
```

```
Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
     50                  55                  60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
 65                  70                  75                  80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
                 85                  90                  95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
            100                 105                 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125
```

<210> 25
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 25

```
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
  1               5                  10                  15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Asp His Ile
             20                  25                  30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
         35                  40                  45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Phe Asp
     50                  55                  60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
 65                  70                  75                  80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
                 85                  90                  95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
            100                 105                 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125
```

<210> 26
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 26

```
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
  1               5                  10                  15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
             20                  25                  30
```

```
Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
         35                  40                  45

Ile Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
     50                  55                  60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
 65                  70                  75                  80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
                 85                  90                  95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
            100                 105                 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125
```

<210> 27
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 27

```
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
  1               5                  10                  15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
             20                  25                  30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Val Tyr Gly Ile Lys Thr
         35                  40                  45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
     50                  55                  60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
 65                  70                  75                  80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
                 85                  90                  95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
            100                 105                 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
        115                 120                 125
```

<210> 28
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 28
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr Arg Ile
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 29
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 29
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
100 105 110

Asp Gly Met Ala Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 30
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 30
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125

<210> 31
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 31
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Asn Thr Gln Pro Ser Gln
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
20 25 30

Lys Ile Thr Asn Ala Gly Gly Arg Arg Ile Gly Trp Ala Ile Lys Thr
35 40 45

Thr Asn Met Arg Arg Leu Ser Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Lys Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala
65 70 75 80

Ala Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Leu
115 120 125

<210> 32
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 32
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Asn Thr Gln Pro Gly Ser
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
20 25 30

Lys Ile Thr Asn Ala Gly Gly Arg Arg Ile Gly Trp Ala Ile Lys Thr
35 40 45

Thr Asn Met Arg Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Ser Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala
65 70 75 80

Ala Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Leu
115 120 125

<210> 33
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 33
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp
50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe
65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro
115 120 125